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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/749,728	12/30/2003	Karl Guthrie	P 6040.13007	9047

7590 12/29/2004

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EXAMINER

SHARP, JEFFREY ANDREW

ART UNIT	PAPER NUMBER
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3677

DATE MAILED: 12/29/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No. 10/749,728	Applicant(s) GUTHRIE ET AL.	
	Examiner Jeffrey Sharp	Art Unit 3677	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 3/15/2004.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1,2 and 4-31 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1,2 and 4-31 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 15 March 2004 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|---|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Status of Claims

- [1] Claims 1, 2, and 4-31 are pending.

Claim Objections

- [2] Claim 23 objected to because of the following informalities:

There is a lack of antecedent basis for '*the smaller base*' on lines 11-12.

Appropriate correction is required.

Claim Rejections - 35 USC § 103

- [3] The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

- [4] Claims 1, 2, and 4-31 are rejected under 35 U.S.C. 103(a) as being unpatentable over Phillips US-4,572,464 in view of Byrne US-4,834,327 and Kakimoto US-5,344,252.

Phillips teaches:

- 1) a cable (22),
- 2) an inner chock (12),
- 3) a **single** outer chock (14),

- 4) a collar (26) slidably received on the cable (22) (Col 2 lines 60-62),
- 5) a biasing compression spring (36) bearing against the collar (26) to bias the
chocks,
- 6) a **single** flexible control cable (24) attached to the collar (26) and outer chock
(14) (Col 2 lines 62-66),
- 7) a cleaning bushing slidably received on the cable (22) (Col 2 lines 40-43, lines
51-52).

Note the collar (26) and cleaning bushing (16) taught by Phillips are shown as one piece.

Also note that a distal end of the cleaning bushing makes contact with a proximal face of the inner chock (12) in Figure 1.

However, Phillips fails to disclose expressly:

- 8) a **plurality** of outer chocks,
- 9) a **plurality** of flexible control cables attached to the outer chocks,
- 10) outer chocks having a **cylindrical** outer portion,
- 11) a **slip-resistant gripping pattern** on the outer chocks,
- 12) the slip-resistant gripping pattern comprising **ridges and grooves**,
- 13) the slip-resistant gripping pattern comprising **50% raised portions and 50% depressed portions**,
- 14) the inner wedge being **frustoconical**, with mating ramped surfaces of the
insides of the outer chocks..

Byrne teaches:

- 8) a **plurality** of diametrically opposed (i.e., symmetrical) outer chocks (41),
- 9) a **plurality** of flexible control cables (44) attached to the outer chocks (41)
- 11) a **slip-resistant gripping pattern** on the outer chocks to improve gripping within the bore (Col 5, lines 54-56).
- 12) the slip-resistant gripping pattern comprising **ridges and grooves** (Figure 7 surface 64),
- 13) the slip-resistant gripping pattern comprising **50% raised portions and 50% depressed portions** (Col 6 lines 16-20),

Kakimoto teaches:

- 10) a plurality of outer chocks (23) having a **cylindrical** outer portion (Figures 9-10), instead of a square outer portion (shown by Phillips)
- 14) the inner chock (22) being **frustoconical**, with mating ramped surfaces of the insides of the outer chocks Figures 9-12

Note that as the inner chock is axially displaced from the outer chocks, a surrounding aperture is filled (Figures 11-12)

At the time of invention, it would have been obvious to one of ordinary skill in the art to modify the expansion bolt taught by Phillips, to comprise the plurality of outer chocks, plurality of flexible control cables, and the slip-resistant gripping pattern as suggested by Byrne, in order to 1) provide 'universal' means for gripping the inside of a bore (by increasing the number of outer chocks), 2) create a more even and reduced load distribution by having more outer chocks, and 3) increase the frictional grip between the outer chocks and the bore by having an even distribution of ridges and grooves.

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At the time of invention, it would have been obvious to one of ordinary skill in the art to modify the inner chock of the expansion bolt taught by Phillips, to comprise a frustoconical shape that mates with inner ramped surfaces of a plurality of cylindrical outer chocks as suggested by Kakimoto, as an alternative to the square outer chocks taught by Phillips. The frustoconical and cylindrical shapes compliment round bores better, and create a more even frictional load distribution. The square shape taught by Phillips is geared more for crevices than circular bores that would be made by a drill bit or the like.

As for Phillips teaching the collar (26) and cleaning bushing (16) to be shown as one piece, it would have been obvious to one having ordinary skill in the art at the time of invention, to separate the collar (26) and cleaning bushing (16), since it has been held that constructing a formerly integral structure in various elements involves only routine skill in the art. *Nerwin v. Erlichman*, 168 USPQ 177, 179.

Conclusion

[5] The prior art made of record and not relied upon is considered pertinent to applicant's disclosure is as follows:

US-5,154,558 McCallion shows a frustoconical inner chock, with cylindrical outer chocks having grooves and ridges.

US-6,729,821 (Applicant) substantially discloses most of the features, except for the slidable cleaning bushing.

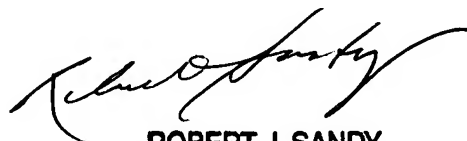
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[6] Any inquiry concerning this communication or earlier communications from the examiner should be directed to Jeffrey Sharp whose telephone number is (703) 305-0426. The examiner can normally be reached on 7:30 am - 5:00 pm Mon-Fri.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, J.J. Swann can be reached on (703) 306-4115. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

JAS



ROBERT J. SANDY
PRIMARY EXAMINER